

PATENT SPECIFICATION

DRAWINGS ATTACHED

885,660



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International Classification:—B05.

COMPLETE SPECIFICATION

Improvements relating to the Spray Painting of Motor Vehicles and Other Surfaces

- We, GENERAL MOTORS HOLDEN'S PROPRIETARY LIMITED, formerly known as General Motors-Holden's Limited, a Company registered under the Laws of the State of Victoria, and having its registered office at Salmon Street, Port Melbourne, in the State of Victoria, Commonwealth of Australia, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—
- This invention relates to paint spray masks.
- Such masks are used to protect an area of a workpiece, which is being spray painted, from the paint spray.
- Hitherto the masks have usually been adhesively secured to the workpiece surface.
- The edge of such an adhesively secured mask which is in contact with the boundary strip between the area of the workpiece being protected and the area being painted is usually contaminated by paint spray. Before the mask can be used again the edge has to be cleaned so as to prevent the contaminated edge sully- ing the boundary strip of another workpiece.
- A mask according to this invention has a flanged edge which conforms in shape to the boundary strip on the workpiece surface, and a flexible preferably resilient, sealing strip on the same side of the mask as, spaced a short distance from the edge and, preferably of slightly greater width than the width of the flange measured parallel to the width of the strip.
- In use the mask is arranged so that the edge of the flange is aligned with but spaced a short distance from the boundary strip, and so that the sealing strip engages the work- piece surface. The sealing strip helps to pre- vent the edge of the flange contacting the workpiece, and forms, with the flange and workpiece surface, an air pocket. The air pocket helps to prevent paint spray passing through the narrow gap separating the edge of the flange and the workpiece surface.
- Since the edge of the flange does not con- tact the workpiece surface, it will not sully the boundary strip of another workpiece.
- Preferably the mask is adapted to be de- tachably secured to the workpiece.
- Masks according to the invention may ad- vantageously be used in combination with motor vehicle bodies, particularly when two different colours are to be applied to the bodies.
- A mask according to this invention does not result in a sharply defined "break" line between respectively the painted and pro- tected areas on the workpiece, but in a partly painted boundary strip between the two areas. The boundary strip, on motor vehicles, is usually covered by chromium plated or like decorative mouldings.
- The scope of the invention is defined by the appended claims; and how it may be per- formed is hereinafter particularly described with reference to the accompanying drawings, in which:—
- Figure 1 is a perspective view of a paint spray mask according to the invention mounted on a motor vehicle body;
- Figure 2 is an enlarged fragmentary section on the line II—II of Figure 1;
- Figure 3 is a front perspective view of an enlarged scale of the mask;
- Figure 4 is a rear inverted perspective view of another mask according to the invention, and
- Figure 5 is a fragmentary horizontal cross section through part of the motor vehicle body.
- Each mask 2 has a main portion 3 which conforms with the shape of the area of the motor vehicle body 4 to be protected. A series of longitudinally spaced hooks 6 are fixed to the main portion 3 and hook over a part of the vehicle body. They are so located that

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the mask tends to tilt to bring the lower edge 7 of the mask towards the surface to be protected.

5 The shape of the lower edge 7 of the main portion 3 conforms in shape with the boundary strip between the area to be painted and the area to be protected on the vehicle body, and has an inwardly directed flange 8 (Figure 2). A soft resilient sealing strip 9 is fixed to
10 the back of the mask so as to extend parallel to and spaced a short distance from the edge 7.

15 The width of the resilient strip when compressed between the body 4 and the mask 2 by the tilting of the mask towards the body is greater than the width of the flange 8, measured parallel to the width of its strip, so that it engages the vehicle body to hold the edge 7 of the flange just clear of the body.
20 The flange 8, sealing strip 9 and vehicle body 4 thus form an open-mouthed air pocket 11.

The sealing strips 9 are preferably made of polyurethane foam; other material such as sponge rubber may be used.

25 Stiffener ribs 12 are fixed to the exterior surface of the main portion 3, and have holes which can be used as handles.

30 In use, a mask 2 is hooked in place on the vehicle body and covers the area of the vehicle body which is to be protected from the paint spray. A boundary strip between the area being painted and the area being protected is obtained without the edge 7 of the flange contacting the surface of the vehicle
35 body. The closed air pocket 11 hinders the paint spray from passing through the narrow gap between the edge 7 and the vehicle body. As this edge does not contact the vehicle body it is unnecessary to clean it after each time
40 the mask has been in use.

45 In spraying the external surface of a motor vehicle body, paint should not be allowed to penetrate into the interior of the body. The spray is most likely to penetrate into the body interior through the door openings, since the door sealing strips are not usually fitted until after the body has been painted. In order to minimize the risk of this occurring, sealing
50 strips 16 of polyurethane foam or other resilient material are compressed and then fitted into weather strip supporting channels 17 (Figure 5). When the door 18 is closed the strips are deformed and form a seal which prevents paint entering the interior of the vehicle body
55 4.

In the two masks illustrated, the lower edge 7 conforms in shape to the boundary strip between the area to be painted by, and the area to be protected from, the paint spray.

60 In other masks according to the invention, it may be other edges, for example vertical or upper edges, which conform in shape with the boundary strip.

65 The sealing strip 9 may be forced against the vehicle body by springs or drawlines, instead of, or in addition to, supporting the mask on the vehicle so that it tends to tilt to move the sealing strip towards the vehicle.

WHAT WE CLAIM IS:—

70 1. A spray paint mask having a flanged edge conforming in shape to the boundary strip on the workpiece surface, and a flexible sealing strip on the same side of the mask as, and spaced a short distance from, the edge.

75 2. A spray paint mask which is adapted to be detachably secured to the workpiece and which has a flanged edge conforming in shape to the boundary strip on the workpiece surface, and a resilient sealing strip on the same side of the mask as, spaced a short distance
80 from the edge, and of slightly greater width than the width of the flange measured parallel to the width of the strip.

85 3. A mask according to Claim 2 which has a number of hooks by which it can be secured to the workpiece, and in which the hooks are so arranged that the mask tends to tilt about them to bring the sealing strip into engagement with the workpiece surface.

90 4. A mask according to any of the preceding claims having on the opposite side to the sealing strip, a plurality of stiffener ribs which also serve as handles.

95 5. A mask according to any of the preceding claims in which the sealing strip is made of polyurethane foam.

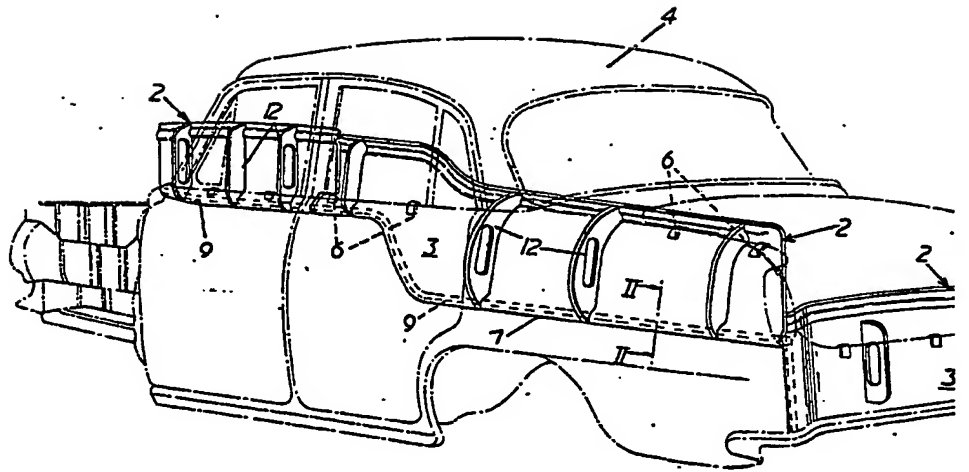
100 6. The combination of a motor vehicle body and a spray paint mask, the mask having hooks by which it is supported by the body so that the mask tends to tilt about the hooks to bring an edge of the mask closer to the body, a flange at the latter edge directed towards, and spaced from the body, and a resilient sealing strip spaced a short distance
105 from the flange and in engagement with the body to hold the flange clear of the body.

110 7. The combination according to Claim 6 which includes strips of resilient sealing material which are fitted into weather strip supporting channels around door openings in the body and which prevent paint penetrating into the interior of the vehicle.

115 8. A spray paint mask substantially as hereinbefore particularly described and as shown in Figures 1 to 4 of the accompanying drawings.

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Chartered Patent Agent.

FIG. 1.



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COMPLETE SPECIFICATION

1 SHEET.

*This drawing is a reproduction of
the Original on a reduced scale*

FIG.3.

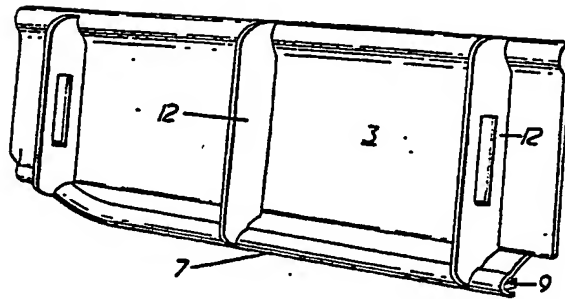


FIG.4.

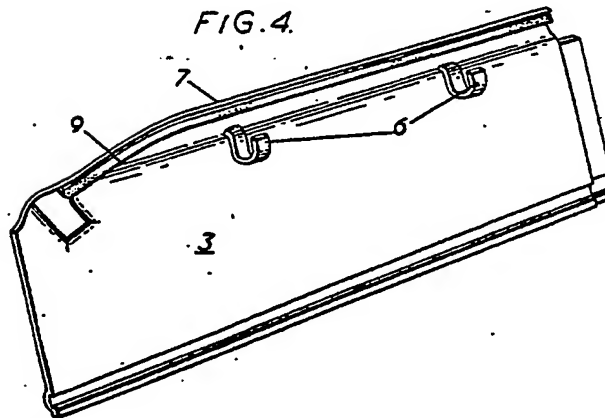


FIG.2.

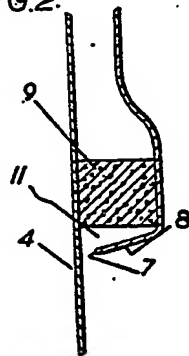


FIG.5.

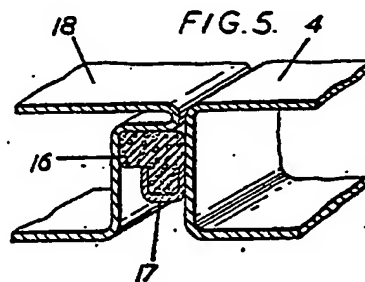


FIG. 1

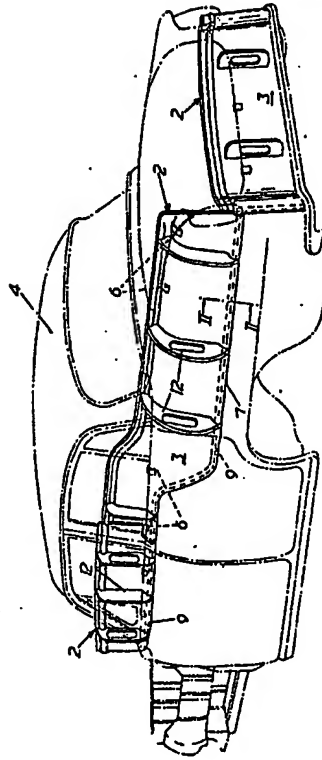


FIG. 3

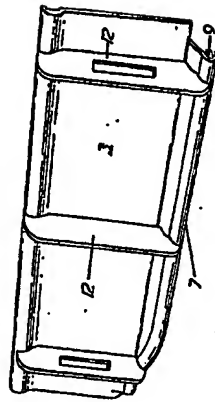


FIG. 4

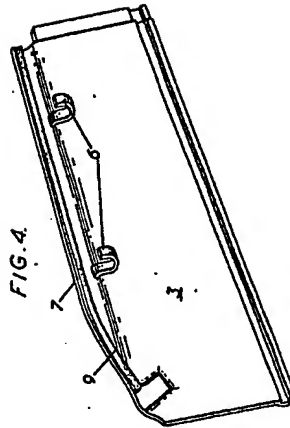


FIG. 2

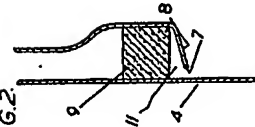


FIG. 5

